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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,748	10/09/2003	Frederick A. Parker	3357-Z	8134

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Law Office of Jim Zegeer  
Suite 108  
801 North Pitt Street  
Alexandria, VA 22314

EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/681,748

Applicant(s)

PARKER, FREDERICK A.

Examiner

Ramesh Krishnamurthy

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This office action is responsive to communications filed 02/22/2006.

**Claims 1 – 8 and 11 - 14 are pending.**

1. This application contains claims 5 - 8 drawn to an invention nonelected with traverse in reply filed on 09/27/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

**Claims 5 – 8 remain withdrawn as being drawn to a non-elected species.**

**Claims 1 – 4, and 11 - 14 remain for further consideration.**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Balazy et al. (US 6,152,162).

Balazy et al. discloses (See Fig. 6, for example) a fluid flow control system (400) comprising a flow path coupling a source of fluid (418); a valve (420) in said flow path, a flow restrictor (428) in said flow path; a pressure transducer (414, 416) connected across said flow restrictor for producing a control signal proportional to pressure differential there across and a controller (405) connected to receive said control signal and continuously adjust the valve (i.e. pulse said valve at a frequency) to obtain a preset target value of pressure differential across the resistor.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balazy et al. (US 6,152,162) as applied to claims 1 and 9 above, and further in view of Doty et al. (US 2001/0032668 A1).

The patent to Balazy et al. discloses the claimed invention with the exception of explicitly disclosing a system of mixing two or more fluids comprising in combination the fluid flow control system recited in claim 1, coupled to a mixer that is also coupled to a source of second fluid.

Doty et al. discloses (Fig. 1, for example) a system of mixing two or more fluids comprising sources (110, 120) of first and second fluids, a controller (200) and a mixer (130) for the purpose of obtaining a controlled mixture of the fluids.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coupled the control system disclosed in Balazy et al. to the mixing arrangement disclosed in Doty et al. for the purpose of providing a controlled mixture of fluids. It is noted that the control system of Balazy et al. is equivalent to the combination of the controller (200) and the flow controller (160) in Doty et al..

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balazy et al. (US 6,152,162) as applied to claims 1 and 11 above, and further in view of Lowery et al. (US 6,564,824).

The patent to Balazy et al. discloses the claimed invention with the exception of explicitly disclosing means for inputting a flow-modifying signal to the controller.

Lowery et al. discloses (Col. 9, lines 30 – 33) means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Balazy et al. means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature, for the purpose of obtaining a more accurate measure of the flow.

7. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Balazy et al. (US 6,152,162) and Doty et al. as applied to claims 2 and 12 above, and further in view of Lowery et al. (US 6,564,824).

The combination of Balazy et al. and Doty et al. discloses the claimed invention with the exception of explicitly disclosing means for inputting a flow-modifying signal to the controller.

Lowery et al. discloses (Col. 9, lines 30 – 33) means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Balazy et al. and Doty et al. means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature, for the purpose of obtaining a more accurate measure of the flow.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

### ***Response to Arguments***

9. Applicant's arguments filed 02/22/2006 have been fully considered but they are not persuasive. Applicant's argument that Balazy does not disclose, or even suggest, a valve in the flow path that controls the flow by pulsating the valve at a controlled frequency to obtain a preset target Pressure is unpersuasive in that the claim does not recite a "pulsating the valve at a controlled frequency". Also, the limitation in claim 1 reads, "a controller connected to receive said signal and pulse said valve at a frequency to obtain a preset target value of Pressure". Clearly the recitation "pulse said valve at a frequency" is a functional limitation and the valve in Balazy et al. is capable of meeting this functional limitation in that it is moved to achieve a target pressure. In Col. 9, lines 56 – 60, Balazy et al. clearly states that the controller (405) "continuously adjusts (as required)" valve (420) "to insure that the actual flow through the system precisely corresponds to that desired ". Thus Balazy et al. is capable of pulsing the valve at a frequency as claimed.

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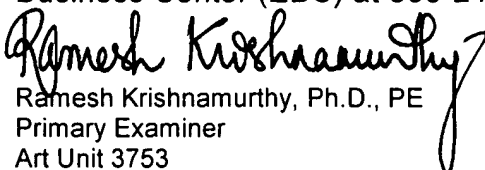
10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 – 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel, can be reached on (571) 272 – 4929. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ramesh Krishnamurthy, Ph.D., PE  
Primary Examiner  
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